

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 59215967
PUBLICATION DATE : 05-12-84

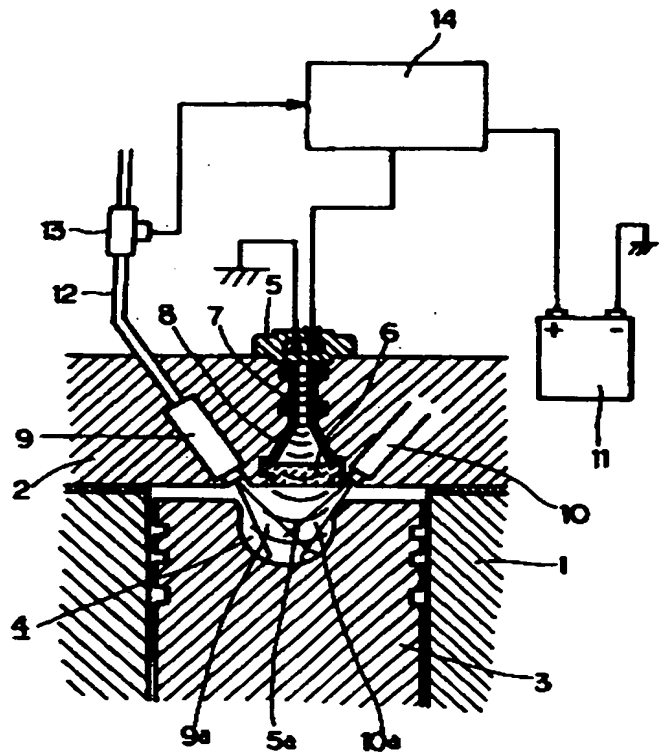
APPLICATION DATE : 24-05-83
APPLICATION NUMBER : 58091325

APPLICANT : TOYOTA MOTOR CORP;

INVENTOR : FURUNO SHIKEO;

INT.CL. : F02P 23/04 F02M 27/00 F02M 31/02

TITLE : ASSISTING DEVICE OF START IN
ENGINE



ABSTRACT : PURPOSE: To instantaneously and directly heat fuel or combustion assisting material in a combustion chamber and eliminate any necessity for heating time so as to surely display a start assisting function, by emitting an electromagnetic wave of very high frequency band to be timed with the ignition timing into the combustion chamber.

CONSTITUTION: A very high frequency oscillator 5 is provided on a cylinder head 2. The very high frequency oscillator 5, receiving a driving signal from a control circuit 14 and emitting an electromagnetic wave 5a of very high frequency band to be timed with the ignition timing of an engine into a combustion chamber 4, is formed by a magnetron or the like. Then the oscillated electromagnetic wave 5a is guided to the combustion chamber 4 by a waveguide 7 and an electromagnetic horn 8 which are embedded in the cylinder head 2. While a part of the wall surface forming the combustion chamber 4 is formed by a permeable material of very high frequency such as heat-proof glass, serving to act as a window 6 of the electromagnetic wave 5a for the combustion chamber 4. Further a fuel injection valve 9 and an auxiliary injection valve 10 are provided in the cylinder head 2.

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